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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,238	04/12/2005	Yasuyuki Tomiyama	259619US0PCT	9016
22850	7590	01/12/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
STULIL, VERA				
ART UNIT		PAPER NUMBER		
1794				
NOTIFICATION DATE		DELIVERY MODE		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com

oblonpat@oblon.com

jgardner@oblon.com

# Office Action Summary

**Application No.**

10/510,238

**Applicant(s)**

TOMIYAMA ET AL.

**Examiner**

VERA STULII

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 September 2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 5-30 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 5-30 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/CIS)  
4) ☐ Interview Summary (PTO-413)  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_  
Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**Claims 5-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morey (US 5,316,779) in view of Cho et al (US 4,105,802) and applicant's admission of the prior art.**

In regard to claims 5-10 and 29-30, Morey discloses aspartame as an artificial sweetener for the carbonated soft drinks (Col. 1 lines 11-26). Morey further discloses that "of many carbonated beverages those containing the artificial sweetener aspartame produce the most foaming and most persistent foam" (Col. 1 lines 22-25). Morey discloses that excessive foaming of aspartame containing beverages becomes a serious problem when aspartame containing beverages are served in disposable cups. Morey also discloses that "antifoaming agent accelerates the rate of collapse of the foam head produced when the beverage is poured" (Col. 2 lines 20-21). Morey further discloses application of the anti-foaming agent to the inner surface of a disposable cup (Col. 2 line 17-20). Therefore, Morey discloses the same problem (excessive foam formation when aspartame is used in the soft carbonated beverages) and solution (use of food-grade anti-foaming agent) as applicants do. Also, although Morey applies the anti-foaming agent to the cup, it does become part of the beverage when the beverage is added to the cup.

Morey does not specifically disclose glycerine fatty acid ester as an antifoaming agent, nor the HLB or molecular weight values of the glycerine fatty acid ester.

Cho et al (US 4,105,802) disclose a process for producing soft carbonated beverages (carbonated coffee drinks) (Abstract). Cho et al disclose that naturally produced coffee extract causes excessive foam formation that leads to a "large quantity overflow" during pouring into the container or opening the container. Cho et al also disclose adding organic additives to the extracted coffee liquid in order to reduce foaming while maintaining its body, taste and flavor. Cho et al also teaches further carbonation of the beverage. Cho et al disclose "glycerin fatty acids esters" as additives (Col 2 line 61; Col. 3 lines 15, 23, 32). Cho further discloses that "the carbonated drink is then charged into a container such as a can or bottle by the conventional method so as to be suitable for the individual consumption. Cho disclose adding glycerin fatty acids ester to the coffee extract (Col. 2 line 15). Applicant's admission of the prior art further evidences the fact that the recited emulsifiers are conventional. In summary, both Morey and Cho disclose:

- the carbonated beverage containing sweeteners;
- problem of excess foam formation;
- use of additives that reduce foam formation (anti-foaming agents).

Morey specifically discloses the problem of foam formation in beverages with aspartame. Cho et al disclose glycerin fatty acids esters as antifoaming agents. Therefore, one of ordinary skill in the art would have been motivated to modify Morey in view of Cho et al and to employ conventional glycerin fatty acids ester as an anti-

foaming agents in the beverages containing aspartame for the benefits as taught by both Morey and Cho et al. In regard to claims 9 and 10, it is noted that the particular conventional glycerin fatty acid ester selected to suppress the foam formation in carbonated soft beverages is seen to have been an obvious result effective variable, routinely determinable. Further in regard to claims 9 and 10, as noted above, applicant's admission of the prior art discloses that the recited compounds were well known emulsifiers. Therefore to substitute one conventional emulsifier/antifoaming agent with another conventional emulsifier/antifoaming agent for its art recognized and applicant's intended function would have been obvious.

Regarding the recited HLB and molecular weight values in claims 5 and 6, it is noted that claims 7 and 8 depend from claims 5 and 6, and the combination of Morey in view of Cho et al meets the limitations of claims 7 and 8, and therefore meet the limitations of claims 5 and 6, because the combination teaches recited emulsifier which would therfoe inherently process the particular recited properties.

In regard to claims 11-16, it is noted that the particular amount of anti-foaming agent employed is seen to have been an obvious result effective variable, routinely determinable depending on the desired anti-foaming effect.

In regard to claims 17-22, Morey in view of Cho et al are silent regarding cola flavor. However, cola flavored carbonated soft beverages containing non-carbohydrate sweeteners including aspartame were well known in the art. Therefore, one of ordinary skill in the art would have been motivated to modify Morey in view of Cho et al and to use glycerin fatty acids ester as an anti-foaming agents in the carbonated soft

beverages having cola flavor as well. One of ordinary skill in the art would have been motivated to do so, since cola flavored carbonated soft beverages were well known in the art.

In regard to claims 23 and 24, Morey discloses carbonated soft beverages (Col. 1 lines 11-26).

In regard to claims 25-28, Morey discloses incorporating aspartame into the carbonated beverage. Also, although Morey applies the anti-foaming agent to the cup, it does become part of the beverage when the beverage is added to the cup. Cho et al disclose a process for producing soft carbonated beverages (carbonated coffee drinks) by adding organic additives to the extracted coffee liquid in order to reduce foaming while maintaining its body, taste and flavor. Cho et al also teaches further carbonation of the beverage. One of ordinary skill in the art would have been motivated to modify Morey in view of Cho et al and to incorporate conventional glycerin fatty acids ester as an anti-foaming agents in the beverages that also incorporates aspartame for the benefits as taught by both Morey and Cho et al. One of ordinary skill in the art would also have been motivated to do so for the reasons as stated above. One of ordinary skill in the art would also have been motivated to incorporated both aspartame and anti-foaming agent into the beverage, since this is seen to be an obvious method of producing a beverage containing both aspartame and anti-foaming agent.

### ***Response to Arguments***

Applicant's arguments filed September 29, 2008 have been fully considered but they are not persuasive.

On page 7 of the Reply to the Office action mailed May 30, 2008 , Applicants summarize the invention and background of the invention.

On page 8 of the Reply, applicants summarize the teachings of the references applied in the rejection (Morey and Cho et al).

On page 7, 8 and 9 of the Reply, Applicants state the following:

The cited references fail to suggest the claimed raw material liquid for a carbonated beverage.

As recognized by the Examiner, Morey does not describe an emulsifier having an HLB value of 1 to 14 or an emulsifier having a molecular weight of 50 to 300.

In fact, Aspartame is not even mentioned by Cho et al. in the preparation of carbonated coffee drinks.

There is certainly no recognition in Cho et al. that Aspartame produces foam.

In addition, the data presented in the specification demonstrates that the claimed emulsifier is more effective in preventing foam as compared to a silicone-based anti foaming as described by Morey.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). As stated in the Office action above, In regard to claims 5-10 and 29-30, Morey discloses aspartame as an artificial sweetener for the carbonated soft drinks (Col. 1 lines 11-26). Morey further discloses that "of many carbonated beverages those containing the artificial sweetener aspartame produce the most foaming and most persistent foam (Col. 1 lines 22-25). Morey discloses that excessive foaming of aspartame containing beverages becomes a serious problem when aspartame containing beverages are served in disposable cups. Morey also discloses that

"antifoaming agent accelerates the rate of collapse of the foam head produced when the beverage is poured" (Col. 2 lines 20-21). Morey further discloses application of the anti-foaming agent to the inner surface of a disposable cup (Col. 2 line 17-20). Therefore Morey discloses the same problem (excessive foam formation when aspartame is used in the soft carbonated beverages) and solution (use of food-grade anti-foaming agent) as applicants do. Also, although Morey applies the anti-foaming agent to the cup, it does become part of the beverage when the beverage is added to the cup. Cho et al (US 4,105,802) disclose a process for producing soft carbonated beverages (carbonated coffee drinks) (Abstract). Cho et al disclose that naturally produced coffee extract causes excessive foam formation that leads to a "large quantity overflow" during pouring into the container or opening the container. Cho et al also disclose adding organic additives to the extracted coffee liquid in order to reduce foaming while maintaining its body, taste and flavor. Cho et al also teaches further carbonation of the beverage. Cho et al disclose "glycerin fatty acids esters" as additives (Col 2 line 61; Col. 3 lines 15, 23, 32). Cho further discloses that "the carbonated drink is then charged into a container such as a can or bottle by the conventional method so as to be suitable for the individual consumption. Cho disclose adding glycerin fatty acids ester to the coffee extract (Col. 2 line 15). Applicant's admission of the prior art further evidences the fact that the recited emulsifiers are conventional. In summary, both Morey and Cho disclose:

- the carbonated beverage containing sweeteners;
- problem of excess foam formation;
- use of additives that reduce foam formation (anti-foaming agents).



Since, Morey specifically discloses the problem of foam formation in beverages with aspartame and Cho et al disclose glycerin fatty acids esters as antifoaming agents, one of ordinary skill in the art would have been motivated to modify Morey in view of Cho et al and to employ conventional glycerin fatty acids ester as an anti-foaming agents in the beverages containing aspartame for the benefits as taught by both Morey and Cho et al.

On page 8 of the Reply, Applicants state that, "[t]he combination of Morey and Cho et al. fails to suggest the claimed liquid". Examiner respectfully disagrees for the reasons as stated above. Combination Morey in view of Cho disclose that aspartame and anti-foaming agent are both incorporated into the carbonated beverage.

On page 8 of the Reply, Applicants state that "Morey and Cho al. are solving two very different types of foaming problems". Examiner respectfully disagrees. As stated above both Morey and Cho et al disclose the problem of excess foam formation and use of additives that reduce foam formation (anti-foaming agents) in the carbonated beverage containing sweeteners. Thus, both Morey and Cho et al are solving the same problem of excess foam formation in the carbonated beverage containing sweeteners.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VERA STULII whose telephone number is (571)272-3221. The examiner can normally be reached on 7:00 am-3:30 pm, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JENNIFER MCNEIL can be reached on (571)272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steve Weinstein/  
Primary Examiner, Art Unit 1794

VS